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overcoat layer; and

20 a black matrix disposed on a surface of said
overcoat layer close to said first substrate over said
data lines;

 said data lines being disposed at respective gaps
between adjacent two of said pixel electrodes;

25 said black matrix being arranged to block light
passing in a predetermined viewing angle range through a
light leakage region created in said liquid crystal layer
depending on a potential difference between adjacent two
of said pixel electrodes.

5. An active matrix liquid crystal display
device according to claim 4, further comprising color
layers disposed on said first substrate, said color
layers constituting color filters.

6. An active matrix liquid crystal display
device according to claim 5, wherein said black matrix is
made of an electrically insulating material, and said
switching elements comprise thin-film transistors.

7. An active matrix liquid crystal display
device driven by a dot inversion driving process, said
active matrix liquid crystal display device comprising:

 a first substrate with a plurality of switching
5 elements disposed thereon;

a second substrate disposed in opposing relation to said first substrate; a liquid crystal layer sandwiched between said first substrate and said second substrate;

10 a plurality of data lines disposed on said first substrate, for supplying data signals to said switching elements;

15 an overcoat layer disposed on said first substrate in covering relation to said data lines and said first substrate;

a plurality of pixel electrodes arranged in a matrix on said overcoat layer; and

20 a black matrix disposed on said data lines; said pixel electrodes being driven by said switching elements, respectively;

said data lines being disposed at respective gaps between adjacent two of said pixel electrodes;

25 said black matrix having a portion overlapping said pixel electrodes, said portion having a width W represented by:

$$W \geq d_{LC}/2 + d_{OC} \cdot \tan \theta$$

30 where d_{LC} represents a thickness of said liquid crystal layer, d_{OC} represents a thickness of said overcoat layer on said black matrix, and θ represents one-half of a given viewing angle 2θ .

8. An active matrix liquid crystal display device according to claim 7, wherein the thickness d_{oc} of said overcoat layer on said black matrix is at most $1 \mu m$, and said overcoat layer planarizes steps of said black matrix to at most $0.5 \mu m$.

9. An active matrix liquid crystal display device driven by a gate line inversion driving process, said active matrix liquid crystal display device comprising:

a first substrate with a plurality of switching elements disposed thereon;

a second substrate disposed in opposing relation to said first substrate; a liquid crystal layer sandwiched between said first substrate and said second substrate;

a plurality of data lines disposed on said first substrate, for supplying data signals to said switching elements;

an overcoat layer disposed on said first substrate in covering relation to said data lines and said first substrate;

a plurality of pixel electrodes arranged in a matrix on said overcoat layer; and

a black matrix disposed on said data lines; said pixel electrodes being driven by said switching elements, respectively;

said data lines being disposed at respective gaps between adjacent two of said pixel electrodes;

said black matrix having a portion overlapping
25 said pixel electrodes, said portion having a width W represented by:

$$W \geq d_{LC}/4 + d_{OC} \cdot \tan \theta$$

where d_{LC} represents a thickness of said liquid crystal layer, d_{OC} represents a thickness of said overcoat layer
30 on said black matrix, and θ represents one-half of a given viewing angle 2θ .

10. An active matrix liquid crystal display device according to claim 9, wherein the thickness d_{OC} of said overcoat layer on said black matrix is at most $1 \mu m$, and said overcoat layer planarizes steps of said black
5 matrix to at most $0.5 \mu m$.

11. An active matrix liquid crystal display device comprising:

a first substrate with a plurality of switching elements disposed thereon;

5 a second substrate disposed in opposing relation to said first substrate;

a liquid crystal layer sandwiched between said first substrate and said second substrate;

a plurality of data lines disposed on said first

10 substrate, for supplying data signals to said switching elements;

an overcoat layer disposed on said first substrate in covering relation to said data lines and said first substrate;

15 a plurality of pixel electrodes arranged in a matrix on said overcoat layer; and

a black matrix disposed on said data lines;

said pixel electrodes being driven by said switching elements, respectively;

20 said data lines being disposed at respective gaps between adjacent two of said pixel electrodes;

said black matrix being disposed in a position above said data lines and arranged to block light passing in a predetermined viewing angle range through a light leakage region created in said liquid crystal layer
25 depending on a potential difference between adjacent two of said pixel electrodes.

12. An active matrix liquid crystal display device according to claim 11, further comprising color layers disposed on said first substrate, said color layers constituting color filters.

13. An active matrix liquid crystal display device according to claim 12, wherein said black matrix is made of an electrically insulating material, and said

switching elements comprise thin-film transistors.

14. An active matrix liquid crystal display device driven by a dot inversion driving process, said active matrix liquid crystal display device comprising:

5 a first substrate with a plurality of switching elements disposed thereon;

a second substrate disposed in opposing relation to said first substrate;

a liquid crystal layer sandwiched between said first substrate and said second substrate;

10 a plurality of data lines disposed on said first substrate, for supplying data signals to said switching elements;

15 an overcoat layer disposed on said first substrate in covering relation to said data lines and said first substrate;

a plurality of pixel electrodes arranged in a matrix on said overcoat layer; and

a black matrix disposed on said overcoat layer above said data lines;

20 said pixel electrodes being driven by said switching elements, respectively;

said data lines being disposed at respective gaps between adjacent two of said pixel electrodes;

25 said pixel electrodes having a portion extending over said black matrix, said portion having a width W

represented by:

$$w \geq d_{LC}/2$$

where d_{LC} represents a thickness of said liquid crystal layer.

15. An active matrix liquid crystal display device driven by a gate line inversion driving process, said active matrix liquid crystal display device comprising:

5 a first substrate with a plurality of switching elements disposed thereon;

a second substrate disposed in opposing relation to said first substrate;

10 a liquid crystal layer sandwiched between said first substrate and said second substrate;

a plurality of data lines disposed on said first substrate, for supplying data signals to said switching elements;

15 an overcoat layer disposed on said first substrate in covering relation to said data lines and said first substrate;

a plurality of pixel electrodes arranged in a matrix on said overcoat layer; and

20 a black matrix disposed on said overcoat layer lines above said data lines;

said pixel electrodes being driven by said

switching elements, respectively;

said data lines being disposed at respective gaps between adjacent two of said pixel electrodes;

25 said pixel electrodes having a portion extending over said black matrix, said portion having a width W represented by:

$$W \geq d_{LC}/4$$

30 where d_{LC} represents a thickness of said liquid crystal layer.

16. An active matrix liquid crystal display device driven by a dot inversion driving process, said active matrix liquid crystal display device comprising:

5 a first substrate with a plurality of switching elements disposed thereon;

a second substrate disposed in opposing relation to said first substrate;

a liquid crystal layer sandwiched between said first substrate and said second substrate;

10 a plurality of data lines disposed on said first substrate, for supplying data signals to said switching elements;

15 an overcoat layer disposed on said first substrate in covering relation to said data lines and said first substrate;

a plurality of pixel electrodes arranged in a

matrix on said overcoat layer; and

a black matrix disposed on said overcoat layer
above said data lines,

20 said pixel electrodes being driven by said
switching elements, respectively;

 said data lines being disposed at respective gaps
between adjacent two of said pixel electrodes;

 said black matrix having a portion extending over
25 said pixel electrodes, said portion having a width W
represented by:

$$W \geq d_{LC}/2$$

where d_{LC} represents a thickness of said liquid crystal
layer.

17. An active matrix liquid crystal display
device driven by a gate line inversion driving process,
said active matrix liquid crystal display device
comprising:

5 a first substrate with a plurality of switching
elements disposed thereon;

 a second substrate disposed in opposing relation
to said first substrate;

 a liquid crystal layer sandwiched between said
10 first substrate and said second substrate;

 a plurality of data lines disposed on said first
substrate, for supplying data signals to said switching

a second substrate disposed in opposing relation to said first substrate;

a liquid crystal layer sandwiched between said first substrate and said second substrate;

10 a plurality of data lines disposed on said first substrate, for supplying data signals to said switching elements;

15 color layers of color filters disposed in at least regions of said first substrate which are free of said data lines;

a plurality of pixel electrodes disposed on said color layers and arranged in a matrix; and

a black matrix of an electrically insulating material disposed on said data lines;

20 said pixel electrodes being driven by said switching elements, respectively;

said data lines being disposed at respective gaps between adjacent two of said pixel electrodes;

25 said pixel electrodes having a portion extending over said black matrix, said portion having a width W represented by:

$$W \geq d_{LC}/2$$

where d_{LC} represents a thickness of said liquid crystal layer.

20. An active matrix liquid crystal display

device driven by a gate line inversion driving process,
said active matrix liquid crystal display device
comprising:

5 a first substrate with a plurality of switching
elements disposed thereon;

a second substrate disposed in opposing relation
to said first substrate;

a liquid crystal layer sandwiched between said
10 first substrate and said second substrate;

a plurality of data lines disposed on said first
substrate, for supplying data signals to said switching
elements;

color layers of color filters disposed in at
15 least regions of said first substrate which are free of
said data lines;

a plurality of pixel electrodes disposed on said
color layers and arranged in a matrix; and

a black matrix of an electrically insulating
20 material disposed on said data lines;

said pixel electrodes being driven by said
switching elements, respectively;

said data lines being disposed at respective gaps
between adjacent two of said pixel electrodes;

25 said pixel electrodes having a portion extending
over said black matrix, said portion having a width W
represented by:

$$W \geq d_{LC}/4$$

where d_{LC} represents a thickness of said liquid crystal
30 layer.

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